IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with <u>underlining</u> and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims in accordance with the following:

1.   (CURRENTLY AMENDED) A two-dimensional code extraction method comprising:

inputting image data;

scanning said input image data in a square block unit of MXN pixels (M and N are positive integers);

detecting blocks that satisfy specific conditions from said scanned blocks;

detecting a plurality of ~~two-dimensional code~~<u>block</u> regions corresponding to <u>a </u>respective plurality of two-dimensional codes, each ~~two-dimensional code <u>block </u>region comprising a number of neighboring and ~~continuous~~<u>contiguous</u> blocks from among said detected blocks that satisfy specific conditions from said scanned blocks;

<u>detecting one or more two-dimensional code regions, each containing a corresponding detected block region comprising a predetermined number of the neighboring and contiguous blocks as a two-dimensional code;</u> and

extracting one or more two dimensional codes from among the detected plurality of two-dimensional code regions that have more than a predetermined number of the neighboring and ~~continuous~~<u>contiguous</u> blocks.

2.   (ORIGINAL) The two-dimensional code extraction method according to claim 1, wherein a block that includes a ratio of white pixels and black pixels that falls within a specific range is detected as a block satisfying said specific conditions.

3.   (PREVIOUSLY PRESENTED) The two-dimensional code extraction method according to claim 1, wherein a block that includes a ratio between transition points of pixels within horizontal lines or vertical lines of the block and a total number of pixels of the block that falls within a specific range is detected as a block satisfying said specific conditions.

4.   (PREVIOUSLY PRESENTED) The two-dimensional code extraction method according to claim 1, wherein a block in which variation of a vertical or horizontal projection of black pixels included in each line in the block falls within a specific range is detected as a block satisfying said specific conditions.

5.   (PREVIOUSLY PRESENTED) The two-dimensional code extraction method according to claim 1, further comprising:
detecting a two-dimensional code region comprising a maximum number of detected neighboring and contiguous blocks from among the detected two-dimensional code regions.

6.   (CURRENTLY AMENDED) The two-dimensional code extraction method according to claim 1, wherein the detecting the two-dimensional code regions further comprisingcomprises:
scanning a detected two-dimensional codeblock region from a point within said two-dimensional codeblock region block by block having a predetermined size upward, downward, to the right and to the left of said point;
detecting a position such that a number of black pixels within said scanned block is less than a predetermined value; and
extracting a square area including said detected position as the two-dimensional code region that contains a block region, for each of the plurality of detected block regions.

7.   (PREVIOUSLY PRESENTED) A two-dimensional code extraction method according to claim 1, further comprising:
calculating average distance between pairs of black pixels within said scanned blocks; and
extracting a scanned block as a detected block satisfying said specific conditions, when a determination is made that said calculated average distance exceeds a predetermined value.

8.   (CURRENTLY AMENDED) The two-dimensional code extraction method according to claim 1, further comprising:

determining an angle of inclination of <u>the input image or the angle of inclination of</u> a ~~detected~~ two-dimensional code <u>based upon a two-dimensional code region containing the detected block region comprising the predetermined number of the neighboring and contiguous blocks as the two-dimensional code</u>~~region~~; and

correcting the angle of inclination, if the angle of inclination exceeds a specific value.

9.   (PREVIOUSLY PRESENTED) The two-dimensional code extraction method according to claim 1, further comprising:

detecting a two-dimensional code region comprising a maximum number of detected contiguous blocks from among the detected two-dimensional code regions.

10.   (CURRENTLY AMENDED) A computer-readable medium storing a program which, when executed by a computer, causes the computer to execute a two-dimensional code extraction method comprising:

inputting image data;

scanning said input image data in a square block unit of MxN pixels (M and N are positive integers);

detecting blocks that satisfy specific conditions from said scanned blocks;

detecting a plurality of ~~two-dimensional code~~<u>block</u> regions corresponding to <u>a</u> respective plurality of two-dimensional codes, each ~~two-dimensional code~~<u>block</u> region comprising a number of neighboring and contiguous blocks from among said detected blocks that satisfy specific conditions from said scanned blocks;

<u>detecting one or more two-dimensional code regions, each containing a corresponding detected block region comprising a predetermined number of the neighboring and contiguous blocks as a two-dimensional code;</u> and

extracting one or more two-dimensional codes from among the detected plurality of two-dimensional code regions that have more than a predetermined number of neighboring and ~~continuous~~<u>contiguous</u> blocks.

11.   (ORIGINAL) The computer-readable medium according to claim 10, wherein a block that includes a ratio of white pixels and black pixels that falls within a specific range is detected as a block satisfying said specific conditions.

12.   (PREVIOUSLY PRESENTED) The computer-readable medium according to claim 10, wherein a block that includes a ratio between transition points of pixels within horizontal lines or vertical lines of the block and a total number of pixels of the block that falls within a specific range is detected as a block satisfying said specific conditions.

13.   (PREVIOUSLY PRESENTED) The computer-readable medium according to claim 10, wherein a block in which variation of a vertical or horizontal projection of black pixels included in each line in the block falls within a specific range is detected a block satisfying said specific conditions.

14.   (PREVIOUSLY PRESENTED) The computer-readable medium according to claim 10, further comprising:
        detecting a two-dimensional code region comprising a maximum number of detected neighboring and contiguous blocks from among the detected two-dimensional code regions.

15.   (CURRENTLY AMENDED) The computer-readable medium according to claim 10, ~~further comprising~~wherein the detecting the two-dimensional code regions further comprises:
        scanning a detected ~~two-dimensional code~~block region from a point within said ~~two-dimensional code~~block region block by block having a predetermined size upward, downward, to the right and to the left of said point;
        detecting a position such that a number of black pixels within said scanned block is less that a predetermined value; and
        extracting a square area including said detected position as the two-dimensional code region that contains a block region, for each of the plurality of detected block regions.

16.   (PREVIOUSLY PRESENTED) The computer-readable medium according to claim 10, further comprising:
        calculating average distance between pairs of black pixels within said scanned blocks; and

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extracting a scanned block as a detected block satisfying said specific conditions, when a determination is made that said calculated average distance exceeds a predetermined value.

17. (CURRENTLY AMENDED) The computer-readable medium according to claim 10, further comprising:

determining an angle of inclination of <u>the input image or the angle of inclination of</u> a ~~detected~~ two-dimensional code ~~region~~<u>based upon a two-dimensional code region containing the detected block region comprising the predetermined number of the neighboring and contiguous blocks as the two-dimensional code</u>; and

correcting the angle of inclination, if the angle of inclination exceeds a specific value.

18. (PREVIOUSLY PRESENTED) The computer-readable medium according to claim 10, further comprising:

detecting a two-dimensional code region comprising a maximum number of detected contiguous blocks from among the detected two-dimensional code regions.

19. (CURRENTLY AMENDED) An apparatus extracting two-dimensional code from an input document, comprising:

an image scanner scanning the document, and outputting input image data; and

a programmed computer processor connected to said image scanner and controlling the apparatus according to a two-dimensional code extraction process, comprising:

scanning said input image data in a square block unit of MxN pixels (M and N are positive integers),

detecting blocks that satisfy specific conditions from said scanned blocks,

detecting a plurality of ~~two-dimensional code~~<u>block</u> regions corresponding to <u>a</u> respective plurality of two-dimensional codes, each ~~two-dimensional code~~<u>block</u> region comprising a number of neighboring and contiguous blocks from among said detected blocks that satisfy specific conditions from said scanned blocks,

<u>detecting one or more two-dimensional code regions, each containing a corresponding detected block region comprising a predetermined number of the neighboring and contiguous blocks as a two-dimensional code,</u> and

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extracting one or more two-dimensional codes from among the detected plurality of two-dimensional code regions that have more than a predetermined number of the neighboring and ~~continuous~~contiguous blocks.

20.   (PREVIOUSLY PRESENTED) The apparatus extracting two-dimensional code according to claim 19, further comprising means for reading information from a computer-readable medium containing computer software for said two-dimensional code extraction process.